

ABSTRACT OF THE DISCLOSURE

A video coding technique having motion compensation within a fine granular scalable coded enhancement layer. In one embodiment, the video coding technique involves a two-loop prediction-based enhancement layer including non-motion-predicted enhancement layer I- and P-frames and motion-predicted enhancement layer B-frames. The motion-predicted enhancement layer B-frames are computed using: 1) motion-prediction from two temporally adjacent differential I- and P- or P- and P- frame residuals, and 2) the differential B-frame residuals obtained by subtracting the decoded base layer B-frame residuals from the original base layer B-frame residuals. In a second embodiment, the enhancement layer further includes motion-predicted enhancement layer P-frames. The motion-predicted enhancement layer P-frames are computed using: 1) motion-prediction from a temporally adjacent differential I- or P-frame residual, and 2) the differential P-frame residual obtained by subtracting the decoded base layer P-frame residual from the original base layer P-frame residual.